

REMARKS

Claims 58, 60 and 62 are canceled. Claims 55 and 56 are amended to correct a typographical error wherein the claims as originally presented depended from dependent claim 44 and should have depended from independent claim 45. Evidence of the typographical error is demonstrated by limitations recited in claims 55-56 that have no antecedent basis in claim 44 but do in claim 45. Reconsideration of the application in view of the amendments and the remarks to follow is requested.

Claims 58, 60 and 62 stand rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the written description requirement. Claims 58, 60 and 62 stand rejected under 35 U.S.C. §112, second paragraph, as being indefinite. Claims 58, 60 and 62 are cancelled, and therefore, the two rejections are rendered moot.

Claims 45-47 and 61 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Kropp et al. (5,362,421) in view of Tuttle (5,558,679). Claims 48 and 49 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Kropp et al. in view of Tuttle ('679), and further in view of Chen et al. (4,975,221). Claims 45, 48-49, and 61 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Chen et al. in view of Tuttle ('679). Claims 46-47 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Chen et al. in view of Tuttle ('679) and further in view of Tsukagoshi et al. (5,843,251),

Kropp et al., or Inoue et al. (5,728,473). Claims 29, 32-36, 51-52, and 57 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Tuttle ('679) in view of Chen et al. Claims 30 and 31 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Tuttle ('679) in view of Chen et al. and further in view of Tsukagoshi et al., Kropp et al., or Inoue et al. Claims 37, 40-44, 53-56, and 59 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Tuttle in view of Chen et al., and further in view of Tuttle (5,646,592). Claims 38 and 39 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Tuttle ('679) in view of Chen et al. and further in view of Tuttle ('592), and further in view of Tsukagoshi et al., Kropp et al., or Inoue et al.

In the previous response, Applicant provided a declaration pursuant to 37 CFR §1.132 to overcome the obviousness rejections presented against the pending claims. However, the Examiner states such declaration is deficient for lacking proof that an electrically conductive epoxy adhesive with silane has better electrical conductivity with a nickel surface or battery than a electrically conductive epoxy adhesive of the prior art (i.e., without silane) (pg. 15 of paper no. 20040317). The Examiner states the necessary proof could be demonstrated by a comparison between an electrically conductive epoxy adhesive with silane additives bonded to a nickel surface or battery versus an electrically conductive epoxy adhesive of the prior art (i.e., without silane) bonded to a nickel surface or battery wherein the electrically conductive epoxy adhesive with silane

demonstrates a higher conductivity (pg. 15 of paper no. 20040317). The Examiner states such comparison will be sufficient to overcome the obviousness rejections of the pending claims (pg. 15 of paper no. 20040317).

Accordingly, filed herewith is a Supplemental §1.132 Declaration executed by one skilled in the art, inventor Rickie Lake, which refers to the Inventor Disclosure of the present invention wherein the Inventor Disclosure provides the comparison and proof requested by the Examiner to overcome the obviousness rejections of the pending claims. Please note, the redacted portions of the Inventor Disclosure are not relevant to demonstrate the comparison and proof requested by the Examiner.

As disclosed in the Inventor Disclosure, a small amount of Z6040 silane agent in a conductive epoxy has been found to significantly improve the electrical conductivity of the conductive epoxy (para. 2.2 of page 1). The proof is presented in the Inventor Disclosure by a comparison between an electrically conductive epoxy adhesive without silane additives (non-Z6040 bearing conductive epoxy) with an electrically conductive epoxy adhesive with silane (Z6040 silane added) (para. 2.3 of page 1). Specifically, a dot of electrically conductive epoxy adhesive without silane additives (non-Z6040 bearing conductive epoxy) was applied to a coin cell battery (verified by the Inventor to have a nickel surface contact) and measured to have a contact resistance range from 2 ohms to 200 ohms (para. 2.3 of page 1). The same sized dot (specific size of the dot is

redacted) of electrically conductive epoxy adhesive with silane (Z6040 silane) was applied to the coin cell battery and measured to have a contact resistance range from negligible to 2 ohms (para. 2.3 of page 1).

Such a comparison of the significant differences in contact resistance is proof of the significant improvement of the electrical conductivity of the electrically conductive epoxy adhesive with silane when used with the nickel surface of a battery. It should be understood that "conductivity is the reciprocal of resistivity" (pg. 92, *Dictionary of Electronics* by E. C. Young, 2nd Ed. 1988), and conversely, "resistivity is the reciprocal of conductivity: the lower the resistivity is of a material the better the conductor it is" (pg. 490, *Dictionary of Electronics* by E. C. Young, 2nd Ed. 1988). Moreover, one skilled in the art understands these relationships between resistivity and conductivity. Consequently, the Supplemental Declaration and Invention Disclosure provide the proof and comparison requested by the Examiner to overcome the rejections against the pending claims. Applicant respectfully requests withdrawal of the obviousness rejections and allowance of claims 29-49, 51-57, 59 and 61 in the next office action.


Further, Applicant herewith submits a duplicate copy of the Supplemental Information Disclosure Statement and Form PTO-1449 filed in this application on January 27, 2004. No initialed copy of the PTO-1449 has been received back from the Examiner. To the extent that the submitted references listed on the Form PTO-1449 have not already been considered, and the Form PTO-1449 has

not been initialed with a copy being returned to Applicant, such examination and initialing are requested at this time, as well as return of a copy of the initialed Form PTO-1449 to the undersigned.

This application is now believed to be in immediate condition for allowance, and action to that end is respectfully requested. If the Examiner's next anticipated action is to be anything other than a Notice of Allowance, the undersigned respectfully requests a telephone interview prior to issuance of any such subsequent action.

Respectfully submitted,

Dated: 7-22-04

By: 
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